A group of diverse children are gathered around a globe, holding it with their hands. They are all smiling and looking at the camera. The background is a solid blue color. The text is overlaid on the image.

California Hydrogen Infrastructure Project (CHIP)

Air Products and Chemicals
Edward F. Kiczek
January 25, 2006

DOE Program Overview

- 3 year program
- Total \$8.88 million
- 50% funding from the DOE
- Multiple projects and stations all in California concentrating in the LA and SF –Sacramento areas.
- Various sites and station operators such as UCI, ConocoPhillips, etc.
- Co-ordinate sites with AQMD, all OEM's and interested energy companies.
- AP leases and maintains equipment.
- Continued support for subsequent year(s) for \$2.8MM total projects

Project Work Plan

Task 1: Torrance Pipeline Hydrogen Fueling Station (PSA, Series 200, Dispenser)

Task 2: Hydrogen Fuelers (HF-150) / Hydrogen Fueling Station in N. CA

HF-150, ConocoPhillips – LA Area

HF-150, TBD – LA Area

HF-150, TBD – South Lake Tahoe

Hydrogen Fueling Station – N. California

Task 3: Upgrades to Two Existing Hydrogen Fueling Stations

UCI - Fueling Station Upgrade (LHy Tank, Series 200) / 700 Bar Dispenser / LH2 Dispenser

Torrance Pipeline Station – 700 Bar Dispenser

Take 4: Hydrogen Based Units (HBU) with Novel Liquid-Gas New Delivery Concept (NDC)

NDC

HBU, TBD – NE Sacramento Area

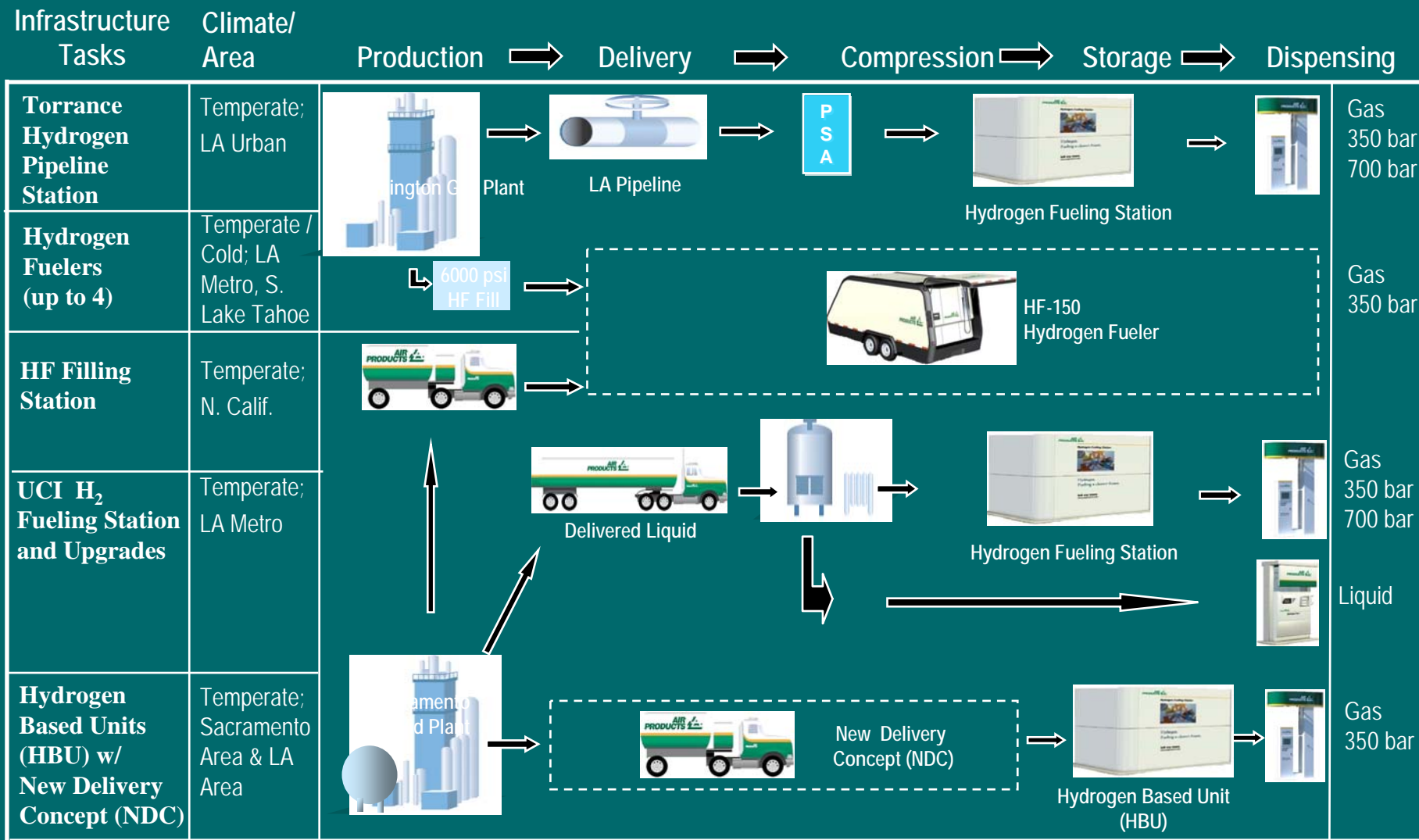
HBU, TBD – LA Area

Task 5: Hydrogen Infrastructure Study (UC Irvine)

Task 6: Infrastructure Data Acquisition, Analysis and Delivery (eRAM)

Task 7: Reporting and Management

California H₂ Infrastructure Program Overview



Timeline - 2006

- UCI

Phase I - 350 bar upgrade === May 2006

Phase II - 700 bar upgrade === Summer 2006

Phase III - LHY Dispenser === Winter 2006

- Torrance Pipeline Station

Phase I - 350 bar === Late summer 2006

Phase II - 700 bar === Early 2007

- HF-150

Westminster, CA === Summer 2006

S. Lake Tahoe === Late 2006

- HBU / NDC

Sacramento Area === Late 2006

LA Basin === Late 2006

- Northern CA Fill Station === Summer 2006

- eRAM data acquisition system === complete